Transforming to a broad and global energy company

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PURPOSE
Turning natural resources into energy for people and progress for society

STRATEGY
Always safe  High value  Low-carbon
Clean energy transition requires a host of measures and technologies

A host of policies and technologies will be needed across every sector to keep climate targets within reach, and further technology innovation will be essential to aid the pursuit of a 1.5°C stabilisation

Source: IEA, WEO 2019
Stop investing in new oil and gas investments is premature

Oil demand and supply from existing fields

- Demand range
- Cumulative supply gap >298 bn bbls
- Legacy supply

Gas demand and supply from existing fields

- Demand range
- Cumulative supply gap >62 Tcm
- Legacy supply

Source: IEA (history), Equinor (projections)
Our value chain

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Development and production</th>
<th>Transportation</th>
<th>Processing and refining</th>
<th>Marketing and trading</th>
</tr>
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<tbody>
<tr>
<td>Offshore seismic and drilling</td>
<td>Offshore oil and gas</td>
<td>Pipelines</td>
<td>Refineries</td>
<td>Oil</td>
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<tr>
<td>Onshore seismic and drilling</td>
<td>Onshore oil and gas</td>
<td>Ships</td>
<td>Gas plants</td>
<td>Gas</td>
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<td>Offshore Wind</td>
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<td>Trains</td>
<td>Energy storage</td>
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<td>Solar</td>
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<td>Power stations</td>
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An industry leader in carbon intensity

Our upstream oil and gas portfolio carbon intensity commitment:

From 10 to 8 kgCO₂ per boe by 2030.

(From 6.1 gCO₂/kWh to 4.9 gCO₂/kWh)

Electricity is today produced at the following intensity in:
Sweden and France: ~ 60g gCO₂/kWh
Germany: >300 gCO₂/kWh
Poland: >600 gCO₂/kWh

Upstream CO₂ intensity
kg CO₂ per boe

Source: IOGP/Equinor
Building a global offshore wind major

<table>
<thead>
<tr>
<th>In production</th>
<th>Bottom fixed</th>
<th>Floating</th>
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</thead>
<tbody>
<tr>
<td>Sheringham Shoal: 317 MW</td>
<td>Dudgeon: 402 MW</td>
<td>Hywind Scotland: 30 MW</td>
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<td>Arkona: 385 MW</td>
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<table>
<thead>
<tr>
<th>Project pipeline</th>
<th>Bottom fixed</th>
<th>Floating</th>
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<tr>
<td>Dogger Bank, UK: 3.6 GW</td>
<td>US East Coast: ~3.5 GW</td>
<td>Hywind Tampan, Norway: 88 MW</td>
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<tr>
<td></td>
<td>Baltyk I, II &amp; III, Poland: ~2.5 GW</td>
<td>Positioning for growth: 12 GW potential by 2030</td>
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</table>
The Dogger Bank Wind farms

- 3 projects (1.2 GW) – developed in phases
- 3.6 GW Combined capacity
- 12 MW Wind Turbines (WTGs)
- Expected to cover 5% of UK’s energy generation
- 50/50 joint venture between Equinor and SSE Renewables*
- First power generation 2023

* Lead operator in construction phase and Equinor in the operations phase
Readiness to invest in well-functioning market based natural carbon removal solutions
Our CCS and hydrogen activities

<table>
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<th>Year</th>
<th>Project</th>
<th>Applications</th>
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<tr>
<td>2023</td>
<td>Northern Lights</td>
<td>CCS for industry</td>
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<tr>
<td>2026</td>
<td>HyDemo Norway</td>
<td>Hydrogen for maritime, Hydrogen for industry (steel)</td>
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<tr>
<td>2026</td>
<td>Clean Steel</td>
<td>Hydrogen for industry, Chemicals, Synthetic fuels, BECCS, Hydrogen power</td>
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<tr>
<td>2026</td>
<td>Zero Carbon Humber</td>
<td>Hydrogen for industry, Post-combustion CCS power generation, CCS for industry, BECCS, Hydrogen production</td>
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<tr>
<td>2026</td>
<td>Clean Gas Project</td>
<td>Hydrogen power, Hydrogen production</td>
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<tr>
<td>2027</td>
<td>H2 Magnum</td>
<td>Hydrogen power</td>
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</tbody>
</table>
Why blue hydrogen?

Europe currently consumes 8000 TWh of oil and gas

How can half of that be converted to decarbonized hydrogen? (assuming all new renewable generation is channeled towards electrification of the remaining)

**Requirements**

- **Energy Source**
  - Blue Hydrogen: Already Exists (Natural Gas)
  - Green Hydrogen: x 150 New Plants

- **Hydrogen Capacity**
  - Blue Hydrogen: x 500 (1 GW units)
  - Green Hydrogen: x 10,000 (10 MW units)

- **Existing Supply Chain annual global deliveries**
  - Blue Hydrogen: x 100 (1 GW units) SMR, ATR, LNG
  - Green Hydrogen: x 100 (10 MW units)
EU household carbon footprint and budget

- Territorial Emissions EU-28
- CO2 Consumption
- - 40% 2030
- - 50% 2030
- - 55% 2030

Graph showing carbon emissions from 1990 to 2030.

Bar chart with years 1990, 2016/17, and 2030.

Pie chart showing:
- Transport: 33%
- Housing: 22%
- Food: 17%
- Manufacturing goods: 10%
- Clothing: 4%

75 - 100 kgCO₂/week
Thank you for your attention
Northern Lights – A European PCI for CO₂ transport and storage network

Planning for a CO₂ transport and storage solution on the NCS

Capturing CO₂ from onshore industrial plants and storing it safely in suitable rock formations offshore

Capacity to store CO₂ ~1,000 years of Norwegian emissions on the NCS

Collaboration between Equinor, Total and Shell

In September 2019 MoUs signed with 7 European companies

Link to animation: LINK
Low carbon production from Johan Sverdrup

The third largest oil field on the Norwegian continental shelf, with expected resources of 2.7 billion barrels of oil equivalent

Estimated combined income from production amounts to 1430 billion NOK (2018) over the life of the field. Income to the Norwegian state expected - more than 900 billion NOK

The field is powered with electricity from shore. CO2 emissions are estimated at just 0.67 kg CO2 per barrel. CO2 emissions reductions from the field estimated at more than 620,000 tonnes of CO2 per year, totaling more than 25 million tonnes of CO2 over the life of the field.
What carbon budget for EU citizens?

- Territorial Emissions EU-28
- CO2 Consumption
- - 40% 2030
- - 50% 2030
- - 55% 2030